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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,045	08/16/2007	Pierre Tchoreloff	1017753-000221	5006

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EXAMINER	
YEAGER, RAYMOND P	

ART UNIT	PAPER NUMBER
1651	

NOTIFICATION DATE	DELIVERY MODE
01/11/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/579,045	TCHORELOFF ET AL.	
	Examiner	Art Unit	
	Raymond P. Yeager	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-85* is/are pending in the application.

4a) Of the above claim(s) *41,42,45,46,48-52,54,63,64,67-72,76,81,82 and 85* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-40,43,44,47,53,55-62,65,66,73-75,77-80,83 and 84* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/10/2006; 09/22/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 37 to 85 are pending.

Election/Restriction

Applicant's election with traverse of group I, claims 37 to 66 and 73 to 84 in the reply filed on 09/17/2009 is acknowledged. The traversal is on the ground(s) that there is no search burden and that the groups relate to a single inventive concept. This is not found persuasive because search burden is not criteria for restriction per PCT Rules 13.1 and 13.2 as recited in the 07/21/2009 restriction requirement (page 2). The groups do not relate to a single inventive concept as the 07/21/2009 restriction requirement has shown that unity is lacking (page 3).

The requirement is still deemed proper and is therefore made FINAL.

Claims 67 to 72 and 85 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 09/17/2009.

Applicant's election of the species noted below in the reply filed on 09/17/2009 is acknowledged.

- Polymer for the polymeric layer: xanthan gum;
- Wax, glycerol fatty acid derivative, or mixture: glycerol fatty acid derivative;
- Film-coating agent: polymers derived from methacrylic acid;
- Active principle: analgesic.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 41 to 42, 45 to 46, 48 to 52, 54, 63 to 64, 76, and 81 to 82 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 09/17/2009.

Claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65 to 66, 73 to 75, 77 to 80, and 83 to 84 are under consideration.

Priority

Acknowledgment is made of applicant's claim for foreign priority in the instant application filed on 08/16/2007. It is noted, however, that applicant has not filed a certified copy of the FRANCE 0313188 application as required by 35 U.S.C. 119(b).

Note – Specification

The use of the trademarks has been noted within this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections – 35 USC § 112 Second Paragraph

The following is a quotation of the second paragraph of 35 USC 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 37 to 40, 43 to 44, 47, 53, 55 to 62, 65 to 66, 73 to 75, 77 to 80, and 83 to 84 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 37 recites the limitation of a "low dose" and the remaining claims depend from claim 37. A low dose has implications for a maximum threshold of the maximum amount considered a "low" dose and a minimum threshold of the minimum amount required to provide a "dose". While the instant specification discloses a short discussion of doses even referring to "very low" doses (page 10, paragraph 6 to page 11, paragraph 2), the applicant does not clearly define the maximum or minim for a low

dose and further the applicant does not define low or "low dose". As such, the metes and bounds for the limits of the upper and lower range of a "low dose" in the formulation are unclear.

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claims 37, 40, 59, 60 to 62, 78 to 80, and 83 to 84 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent application publication 2004/0242640 (Publication date: 07/21/1998), hereafter referred to as the '640 publication.

As discussed *supra*, the applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a polymeric layer of xanthan gum and a therapeutic layer (i.e. active layer) coating the polymeric layer which includes an analgesic in the therapeutic layer. The composition may further comprise a binder, a glycerol fatty acid derivative, lubricant, and/or a film-forming agent. The film-forming agent may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously and the tablets may be scored.

The teaches an inert core ('640, page 15, paragraphs 419-420) made by direct compression ('640, page 16, paragraph 438) which is coated with a first layer comprising HPMC (i.e. hydrophilic polymer) and an analgesic (abstract) which is layered ('640 page 17, paragraph 442 and page 19 paragraphs 459-460) and a second film coating comprising a sustained release polymer (i.e. EUDRAGIT) and an analgesic ('640, page 19, paragraph 461) with analgesic dosages as low as about 10 mg ('640, page 7, paragraph 189) (limitations in instant claims 37, 40, 59, 60 to 62, 78 to 80, and 83 to 84).

- Claims 37, 39, 57, 59, 60, 62, 65, 73, 78 and 79 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,783,215 (Publication date: 07/21/1998), hereafter referred to as the '215 publication.

Applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a 1 to 50 percent weight polymeric layer and an therapeutic layer (i.e. active layer) coating the polymeric layer with an analgesic (at less than 50 mg to less than 10 mg) as the therapeutic agent. The neutral support is sucrose and corn starch with a particle size between 100 and 500 µm. The polymeric layer is an extended-release, hydrophilic, natural polysaccharide (which may be modified) gum such as xanthan gum with a claimed viscosity of more than 1,000 mPa/s at 20 °C in 2 percent aqueous solution. The glycerol fatty acid derivatives are selected from the group of glycerol monostearate, glycerol monooleate, glycerol palmitostearate, and mixtures of fatty acid esters and glycerides of polyethylene glycol such as lauroyl macrogolglycerides. The film forming polymer may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously.

The '215 patent teaches an embodiment of a direct compression tablet formulation comprising an inert core (such as sugar spheres between 100 to 500 µm), covered with an hydrophilic polymeric layer covered then with an active layer wherein the active layer comprises a hydrophilic polymer and a therapeutic agent ('215, column 1, lines 31-40; column 4, line 59 to column 5, line 6; and column 5, lines 54-57) (limitations in instant claims 37). The polymeric layer is approximately 5 percent weight of the formulation and even if three layers were present, the sum would be approximately 15 percent weight ('215, column 6, example 1) (limitations in instant claims 39 and 73). The neutral support is sucrose and corn starch with a particle size between 100 and 500 µm ('215, column 3, lines 12-21) (limitations in instant claims 57, 78, and 79). The analgesic is homogenously distributed in the hydrophilic polymer ('215, column 3, lines 50-54; column 3, lines 63-67; and column 5, line 63 to column 6, line 3) (limitations in instant claims 62, and 65). The formulation also comprises a

release controlling layer (i.e. film forming polymer) ('215, column 2, lines 62-65; column 4, paragraphs 2-4) (limitations in instant claims 59 and 60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65, 73 to 75, 77 to 80, and 83 to 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,783,215 (Publication date: 07/21/1998), in view of US Patent 6,607,751 (Publication date: 08/19/2003), hereafter referred to as the '751 patent.

Applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a 1 to 50 percent weight polymeric layer and an therapeutic layer (i.e. active layer) coating the polymeric layer with an analgesic (at less than 50 mg to less than 10 mg) as the therapeutic agent. The composition may further comprise a binder, a glycerol fatty acid derivative, lubricant (at less than 5 percent), and/or a film-forming agent. The neutral support is sucrose and corn starch with a particle size between 50 and 3000 µm to between 100 and 500 µm. The polymeric layer is an extended-release, hydrophilic, natural polysaccharide (which may be modified) gum such as xanthan gum with a claimed viscosity of more than 1,000 mPa/s at 20 °C in 2 percent aqueous solution. The glycerol fatty acid derivatives are selected from the group of glycerol monostearate, glycerol monooleate, glycerol palmitostearate, and mixtures of fatty acid esters and glycerides of polyethylene glycol such as lauroyl macrogolglycerides. The film forming polymer may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously and the tablets may be scored.

The '215 patent teaches an embodiment of a direct compression tablet formulation comprising an inert core (such as sugar spheres), covered with an hydrophilic polymeric layer with an active layer over this hydrophilic polymer layer wherein the active layer comprises a hydrophilic polymer and a therapeutic agent ('215, column 1, lines 31-40; column 4, line 59 to column 5, line 6; and column 5, lines 54-57) (limitations in instant claims 37). The polymeric layer is approximately 5 percent weight of the formulation and even if three layers were present, the sum would be approximately 15 percent weight ('215, column 6, example 1) (limitations in instant claims 39 and 73). The formulation may comprise excipients such as starch in the core ('215, column 6, lines 41-62) and a binder such as polyvinylpyrrolidone in the hydrophilic polymeric layer and the therapeutic layer ('215, column 5, lines 37-46) (limitations in instant claims 38, 56, and 57) and the core may be sized between 100 μm to 500 μm ('215, column 3, lines 12-21) (limitations in instant claims 57, 78, and 79). The '215 patent also provides for the addition of a lubricant at less than 5 percent weight ('215, column 5, lines 54-62 and column 7, example 5) (limitations in instant claim 58). The formulation may further comprise a release controlling membrane (i.e. film-forming agent) such as methacrylic acid copolymers (i.e. EUDRAGIT) ('215, column 2, lines 62-65; column 4, paragraphs 2-4) (limitations in instant claims 59, 60, and 80). The therapeutic agent may be an analgesic which is homogenous in the hydrophilic polymer ('215, column 3, lines 50-54; column 3, lines 63-67; and column 5, line 63 to column 6, line 3) (limitations in instant claims 62, and 65). The '215 patent provides that the ration of therapeutic agent to hydrophilic polymer is 10:1 to 1:2 ('215, column 3, lines 55 to 59) and as the hydrophilic polymeric layer was determined to be approximately 5 percent of the core, the amount of active ingredient should be approximately 0.5 to 10 percent weight of the core and 0.5 percent weight at a 10:1 ratio as applied to example 6 ('215, column 7) would provide a minimum of approximately 8.5 mg of therapeutic agent, which is less than 10 mg (limitations in instant claims 61, 83, and 84).

The difference between the instant application and '215 patent is that the '215 patent does not expressly teach xanthan gum as the hydrophilic polymer or glycerol

fatty acid derivatives in the hydrophilic polymeric layer. This deficiency in the '215 patent is cured by the teachings of the '751 patent. The '534 patent teaches that xanthan gum and lauroyl macrogol glycerides (i.e. GELUCIRE® 44/14) are preferred components for compressed tablets to serve as a release control matrix ('751, column 2, lines 53-63). As the '751 patent discloses xanthan gum and lauroyl macrogolglycerides appropriate for the hydrophilic polymeric coating, it would be obvious to one of ordinary skill in the art to use xanthan gum and lauroyl macrogolglycerides the hydrophilic polymer in the composition of the '215 patent (limitations in instant claims 40, 43, 44, 53, 55, 75 and 77). The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics. In the instant application the applicant claims a viscosity range for the hydrophilic polymer. When as here, the prior art appears to contain the same ingredients and applicant's own disclosure supports the suitability of the prior art composition as the inventive composition component, the burden is properly shifted to applicant to show otherwise (limitations in instant claim 74).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a low dose directly compressed tablet formulation comprising an inert core, a hydrophilic polymeric layer over the core, and a therapeutic layer over the previous layer, and a copolymer film of acrylic acids as the outermost layer as taught by the '215 patent, provide xanthan gum and lauroyl macrogolglycerides as the hydrophilic polymer as taught by the '751 patent. One of ordinary skill in the art would have been motivated to do this because the '751 patent teaches a matrix of xanthan gum and lauroyl macrogolglycerides provides for a controlled release of the therapeutic agent which may be a sustained and/or pulsatile release ('751, column 1, lines 10-21). In light of the forgoing discussion, it would be obvious to one of ordinary skill in the art that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the

time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

- Claims 37 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,783,215 (Publication date: 07/21/1998), in view of US Patent 6,607,751 (Publication date: 08/19/2003), hereafter referred to as the '751 patent, as in claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65, 73 to 75, 77 to 80, and 83 to 84 above, and further in view of Gennaro 1990.

As discussed *supra*, the applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a polymeric layer of xanthan gum and a therapeutic layer (i.e. active layer) coating the polymeric layer which includes an analgesic in the therapeutic layer. The composition may further comprise a binder, a glycerol fatty acid derivative, lubricant, and/or a film-forming agent. The film-forming agent may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously and the tablets may be scored.

As discussed *supra*, the combination of the '215 patent and the '751 patent teaches an low-dose direct compression tablet formulation comprising an inert core (such as sugar spheres size between 100 and 500 μm), covered with a xanthan gum layer with a therapeutic layer over this layer wherein the therapeutic layer comprises a homogenous distribution of xanthan gum and an analgesic. The formulation may comprise a lubricant, excipients such as starch in the core, a binder such as polyvinylpyrrolidone in the hydrophilic polymeric layer. The formulation may further comprise film-forming agent comprised of acrylic acid copolymers (limitations in instant claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65 to 65, 73 to 75, 77 to 80, and 83 to 84).

The combination of the '215 patent and the '751 patent does not expressly teach the tablets are scored. This deficiency in the '215 combination of the '215 patent and the '751 patent is cured by the teachings of Gennaro 1990. Gennaro 1990 teaches that scoring a tablet was well-known to one of ordinary skill in the art (page 1647, column 1, paragraph 5 to column 2, paragraph 1). It would have been obvious to one of ordinary

skill in the art at the time the claimed invention was made to provide a low dose directly compressed tablet formulation comprising an inert core, a xanthan gum layer over the core, and a therapeutic layer (comprising xanthan gum, lauroyl macrogolglycerides, and an analgesic) over the previous layer, and a copolymer film of acrylic acids as the outermost layer as taught by the combination of the '215 patent and the '751 patent, and score the tablet as taught by the Gennaro 1990. One of ordinary skill in the art would have been motivated to do this because Gennaro 1990 teaches that tablets are scored to provide for the ease of breaking of tablets into halves or quarters (page 1647, column 1, paragraph 5 to column 2, paragraph 1) and as evidenced of the presence of this disclose in the Remington's text as earlier as 1990, the technique of scoring tablets was well-known to one of ordinary skill in the art. In light of the forgoing discussion, it would be obvious to one of ordinary skill in the art that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

- Claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65, 73 to 75, 77 to 80, and 83 to 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,783,215 (Publication date: 07/21/1998), in view of Damian et al, 2000 (*European Journal of Pharmaceutical Sciences*, vol. 10:311-322 US Patent 5,292,534 (Publication date: 03/08/1994), hereafter referred to as the '534 patent, and Trinidade and Grosso, 2000 (*J. Microencapsulation*, vol. 17(2):169-176).

Applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a 1 to 50 percent weight polymeric layer and an therapeutic layer (i.e. active layer) coating the polymeric layer with an analgesic (at less than 50 mg to less than 10 mg) as the therapeutic agent. The composition may further comprise a binder, a glycerol fatty acid

derivative, lubricant (at less than 5 percent), and/or a film-forming agent. The neutral support is sucrose and corn starch with a particle size between 50 and 3000 µm to between 100 and 500 µm. The polymeric layer is an extended-release, hydrophilic, natural polysaccharide (which may be modified) gum such as xanthan gum with a claimed viscosity of more than 1,000 mPa/s at 20 °C in 2 percent aqueous solution. The glycerol fatty acid derivatives are selected from the group of glycerol monostearate, glycerol monooleate, glycerol palmitostearate, and mixtures of fatty acid esters and glycerides of polyethylene glycol such as lauroyl macrogolglycerides. The film forming polymer may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously.

As discussed *supra*, the '215 patent teaches an embodiment of a low-dose, direct compression tablet formulation comprising an inert core (such as sugar spheres), covered with an hydrophilic polymeric layer at about 5 percent weight with an active layer over this hydrophilic polymer layer wherein the active layer comprises a hydrophilic polymer and a an analgesic (i.e. homogenously distributed). The formulation may comprise a lubricant at less than 5 percent, excipients such as starch in the core, and a binder such as polyvinylpyrrolidone in the hydrophilic polymeric layer, and the core may be sized between 100 µm to 500 µm). The formulation may further comprise a release controlling membrane (i.e. film-forming agent) such as acrylic acid copolymers (limitations in instant claims 37 to 39, 56 to 62, 65, 73, 78 to 80, and 83 to 84).

The difference between the instant application and '215 patent is that the '215 patent does not expressly teach xanthan gum as the hydrophilic polymer or glycerol fatty acid derivatives in the hydrophilic polymeric layer. This deficiency in the '215 patent is cured by the teachings of Damian et al, 2000, the '534 patent, and Trinidade and Grosso, 2000. Damian et al, 2000 teaches lauroyl macrogol glycerides can be used in solid dispersions (abstract). The '534 patent teaches that xanthan gum may be used to provide a stable, hydrophilic coating in directly compressed tablets (column 3, paragraphs 1 and 6 and column 4, paragraphs 3 and 4). The specification asserts the mixtures as taught in the '534 patent are not suitable for a low-dose form because the

xanthan gum polymer powder form is too large and dense to provide an appropriate ratio to the therapeutic agent and thus xanthan gum cannot provide a homogenous distribution of the therapeutic agent (instant specification, page 7, paragraph 3). The '534 document provides that xanthan gum can be used as the hydrophilic polymer layer to homogenously distribute the therapeutic agent over the core and the '534 document provides for xanthan particles as low as about 74 µm ('534, column 4, lines 55-58 and column 5, paragraph 1). Further, Trinidade and Grosso, 2000 xanthan gum can be used to homogenously distribute ascorbic acid resulting in average particle sizes of 8 µm (abstract, and page 171, paragraphs 1-2), and ascorbic acid is about the same molecular weight as aspirin. The instant specification also discloses the xanthan gum powder has particles between 10 µm and 180 µm and the particle sizes in the '534 patent fall in this range (instant specification, page 20, paragraph 3). As such, assertion in the instant specification that the xanthan gum particle in the '534 patent is inappropriate may raise questions whether the xanthan gum particle size limitations disclosed in the instant specification are appropriate.

As discussed *supra*, the '534 patent discloses xanthan gum appropriate as a hydrophilic coating and Damian et al, 2000 teaches the use of lauroyl macrogolglycerides in solid dispersions, it would be obvious to one of ordinary skill in the art to use xanthan gum and the hydrophilic polymer in the composition of the '215 patent (limitations in instant claims 40, 43, 44, and 75). The U.S. Patent Office is not equipped with analytical instruments to test prior art compositions for the infinite number of ways that a subsequent applicant may present previously unmeasured characteristics. In the instant application the applicant claims a viscosity range for the hydrophilic polymer. When as here, the prior art appears to contain the same ingredients and applicant's own disclosure supports the suitability of the prior art composition as the inventive composition component, the burden is properly shifted to applicant to show otherwise (limitations in instant claim 74).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a low dose directly compressed tablet formulation comprising an inert core, a hydrophilic polymeric layer over the core, and a

therapeutic layer over the previous layer, and a copolymer film of acrylic acids as the outermost layer as taught by the '215 patent, provide lauroyl macrogolglycerides as taught by Damian et al, 2000 and provide xanthan gum as taught by the '534 patent and Trinidade and Grosso, 2000. One of ordinary skill in the art would have been motivated to do this because Damian et al, 2000 teaches lauroyl macrogolglycerides reduces particle aggregation and improves surface properties of a solid dispersion to provide an improved dissolution rate for a therapeutic agent (abstract, section 3.2., and conclusion), the '534 patent teaches xanthan gum can control the release of an active ingredient, has excellent aqueous rheological properties, and may be compressed to reduce size ('534, column 3, paragraphs 4 and 6; column 6, lines 51-53; and column 4, paragraph 3), and Trinidade and Grosso, 2000 teach spray application of xanthan gum can provide stable coatings as small as 8 μm. In light of the forgoing discussion, it would be obvious to one of ordinary skill in the art that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

- Claims 37 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,783,215 (Publication date: 07/21/1998), in view of Damian et al, 2000 (*European Journal of Pharmaceutical Sciences*, vol. 10:311-322 US Patent 5,292,534 (Publication date: 03/08/1994), hereafter referred to as the '534 patent, and Trinidade and Grosso, 2000 (*J. Microencapsulation*, vol. 17(2):169-176) as in claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65, 73 to 75, 77 to 80, and 83 to 84, and further in view of Gennaro 1990.

As discussed *supra*, the applicant claims a low-dose tablet composition produced by direct compression of microgranules wherein the composition comprises a neutral support covered with a polymeric layer of xanthan gum and a therapeutic layer (i.e.

active layer) coating the polymeric layer which includes an analgesic in the therapeutic layer. The composition may further comprise a binder, a glycerol fatty acid derivative, lubricant, and/or a film-forming agent. The glycerol fatty acid derivatives are selected from the group of glycerol monostearate, glycerol monooleate, glycerol palmitostearate, and mixtures of fatty acid esters and glycerides of polyethylene glycol such as lauroyl macrogolglycerides. The film forming polymer may be copolymers of methacrylic acid. The claims also recite the therapeutic agent is distributed homogenously and the tablets may be scored.

As discussed *supra*, the combination of the '215 patent, Damian et al, 2000, the '534 patent, and Trinidade and Grosso, 2000 teaches an low-dose direct compression tablet formulation comprising an inert core (such as sugar spheres size between 100 and 500 μm), covered with a xanthan gum layer with a therapeutic layer over this layer wherein the therapeutic layer comprises a homogenous distribution of xanthan gum and an analgesic. The formulation may comprise a lubricant, excipients such as starch in the core, a binder such as polyvinylpyrrolidone in the hydrophilic polymeric layer. The formulation may further comprise film-forming agent comprised of acrylic acid copolymers (limitations in instant claims 37 to 40, 43 to 44, 47, 53, 55 to 62, 65, 73 to 75, 77 to 80, and 83 to 84).

The combination of the '215 patent, Damian et al, 2000, the '534 patent, and Trinidade and Grosso, 2000 does not expressly teach the tablets are scored. This deficiency in these references is cured by the teachings of Gennaro 1990. Gennaro 1990 teaches that scoring a tablet was well-known to one of ordinary skill in the art (page 1647, column 1, paragraph 5 to column 2, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to provide a low dose directly compressed tablet formulation comprising an inert core, a xanthan gum layer over the core, and a therapeutic layer (comprising xanthan gum, lauroyl macrogolglycerides, and an analgesic) over the previous layer, and a copolymer film of acrylic acids as the outermost layer as taught by the combination of the '215 patent, Damian et al, 2000, the '534 patent, and Trinidade and Grosso, 2000, and score the tablet as taught by the Gennaro 1990. One of ordinary skill in the art would have

been motivated to do this because Gennaro 1990 teaches that tablets are scored to provide for the ease of breaking of tablets into halves or quarters (page 1647, column 1, paragraph 5 to column 2, paragraph 1) and as evidenced of the presence of this disclose in the Remington's text as earlier as 1990, the technique of scoring tablets was well-known to one of ordinary skill in the art. In light of the forgoing discussion, it would be obvious to one of ordinary skill in the art that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 37, 38, 43, 56 to 59, 61, 78, 79, 83, and 84 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3, 8, 9, 10, 14, 17, and 18 of copending Application No. 10/031,949 in view of US Patent 5,783,215 (Publication date: 07/21/1998), hereafter referred to as the '215 publication.

The instant application claims a tablet comprising a 100 to 500 μm neutral support, a binder, less than 5 percent lubricant, a hydrophilic polymeric layer coated by another polymeric layer with a therapeutic agent, and an outer film-coating layer (limitation in instant claims 37, 38, 43, 56 to 59, 61, 78, 79, 83, and 84).

The '949 application teaches a low dose tablet comprising 200 to 400 μm neutral microgranules coated with a therapeutic agent and binder, and a film coating and comprising a lubricant (claims 3, 8, 9, 10, 14, 17, and 18). The prior art teachings of the '949 application do not explicitly teach the inner layer comprising a hydrophilic polymer, however, the '215 patent teaches all the limitations that are deficient in the '949 application. The '215 patent teaches the coating of an inert sphere with a hydrophilic polymer and a therapeutic agent and a release controlling membrane and further notes additionally layers of hydrophilic polymers may be provided between the core and the release controlling layer ('215, column 1, paragraphs 2-4). It would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to provide a neutral microgranule with a coating of an active principle and a binder with as taught by the '949 application and provide an additional hydrophilic layer as taught by the '215 patent. A person of ordinary skill in the art would have been motivated to do so because the '215 patent teaches this alleviates the mechanical stress required to compress multiple unit dosages ('215, column 1, paragraphs 2-4). In light of the forgoing discussion, it would be obvious to one of ordinary skill in the art that the subject

matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

No claims are allowed; all claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond P. Yeager whose telephone number is (571) 270-7681. The examiner can normally be reached on Mon - Thurs 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached at (571) 272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

R.P.Y.

/Leon B Lankford/
Primary Examiner, Art Unit 1651